

WHAT IS CLAIMED IS:

1. A program reproducing method of reproducing an existing program, which has been created by a method other than the Lyee development method, as a new program
5 having a structure in accordance with the Lyee development method while maintaining functions accomplished by said existing program, comprising steps of:

extracting a word, which is being used in said
10 existing program, from said program in a form in which a definitive to which this word is related is identified;

assigning the extracted word to one or a plurality of pallets in dependence upon the type of definitive to which the word is related; and

15 converting each statement or command of the existing program to a form in accordance with any of a plurality of program components having a structure in compliance with the Lyee development method in one or a plurality of pallets to which words contained in the
20 statements or commands have been assigned.

2. A program reproducing method according to claim 1, wherein a statement or a command, from among statements or commands of an existing program, that is for generating data to be stored in a field represented by a
25 word is converted to a form in accordance with a program component for data generation from among said plurality of program components.

3. A program reproducing method according to claim 1,

determining whether a relationship between two or
5 more pallets to which respective ones of two or more
words being used in the statement or command is a
relationship that satisfies a predetermined sequence;

15 assigning new words to one or a plurality of
pallets in such a manner that the relationship between
two or more pallets, to which two or more words included
in each of the statements or commands obtained by
decomposition are assigned, will satisfy the
predetermined sequence.

5. A program reproducing method according to claim 1, further comprising a step of adopting a statement or command, which executes physical input/output processing with regard to a definitive, from among statements or commands of an existing program as part of a program component, which is for performing overall control of pallets, from among said plurality of program

components.

6. A program reproducing method according to claim 1, wherein said pallet is any of a W04 pallet relating to output processing, a W02 pallet relating to input
5 processing and a W03 pallet relating to data generation processing, further comprising steps of:

if an extracted word is related to a definitive used in input processing, assigning this word to at least the W02 pallet; and

- 10 if an extracted word is related to a definitive used in output processing, assigning this word to at least the W04 pallet.

7. A program reproducing method according to claim 6, wherein a set consisting of a W04 pallet, W02 pallet and
15 W03 pallet is provided in accordance with the type of definitive to which a word being used in an existing program is related.

8. A program reproducing method according to claim 6, wherein if a word being used in said existing program is
20 a word not related to a definitive, a set consisting of a W04 pallet, W02 pallet and W03 pallet for assigning this word is provided separately.

9. A program reproducing method according to claim 6, wherein if a description of error processing is included
25 in said existing program, a set consisting of a W04 pallet, W02 pallet and W03 pallet for handling this error processing is provided separately.

10. A program reproducing method of reproducing an

5 accomplished by said existing program, comprising steps
of:

preparing, with regard to the extracted definitive,
10 a plurality of program components for operating a base
structure consisting of a set of W02, W04 and W03
pallets;

assigning the words to one or a plurality of the
pallets among the W02, W04 and W03 pallets, with regard
to the definitive to which the words belong, in
dependence upon the definitive to which the extracted
words belong and the input/output categories of the
words; and

converting a statement or command that contains a word of the existing program to a form in accordance with any of a plurality of program components having a structure in compliance with the Lyee development method in a pallet related to the statement or command through the word.

if an extracted word belongs to a definitive used
in input processing, assigning this word to at least the
5 W02 pallet; and

12. A program reproducing method according to claim 10,
10 wherein if an extracted word is a word that does not
belong to any extracted definitive, a plurality of
program components which operate a base structure for
assigning this word are prepared separately.

14. A program reproducing method according to claim 10,
20 wherein a statement or a command, from among statements
or commands of an existing program, that is for
generating data to be stored in a field represented by a
word is converted to a form in accordance with a program
component for data generation from among said plurality
25 of program components.

15. A program reproducing method according to claim 10,
further comprising the following steps with regard to a
statement or command that includes two or more words

among statements or words of an existing program:

determining whether a relationship between two or more pallets to which respective ones of two or more words being used in the statement or command is a
5 relationship that satisfies a predetermined sequence;

in a case where the relationship between two or more pallets does not satisfy the predetermined sequence, decomposing the statement or command into a plurality of statements or command and incorporating a
10 new word in each statement or command obtained by decomposition; and

assigning new words to one or a plurality of pallets among the W04, W02 and W03 pallets in such a manner that the relationship between two or more
15 pallets, to which two or more words included in each of the statements or commands obtained by decomposition have been assigned, will satisfy the predetermined sequence.

16. A program reproducing method according to claim 10,
20 further comprising a step of adopting a statement or command, which executes physical input/output processing with regard to a definitive, from among statements or commands of an existing program as part of a program component, which is for performing overall control of
25 pallets, from among said plurality of program components.

17. A program reproducing method according to claim 10, further comprising a step of creating a process route

diagram, which represents the flow of processing of said existing program, from said existing program by one base structure or by a combination of a plurality of base structures.

- 5 18. A program reproducing method according to claim 17, further comprising steps of:

if a route connected to two or more different base structures or a route connected to quit processing is expressed in said process route diagram, extracting,
10 from said existing program, a conditional statement or conditional command representing a branch condition at a branch point of the route; and

converting the extracted conditional statement or conditional command to a form in compliance with a
15 program component, which is for route determination, from among a plurality of program components of a pallet from which said branch point originates.

19. A program reproducing method according to claim 10, further comprising steps of:

20 searching for a conditional statement or conditional command representing a data input condition or a data output condition based upon the description of an existing program; and

if a conditional statement or conditional command
25 representing a data input condition or a data output condition has been extracted, converting the extracted conditional statement or conditional command to a form that is in accordance with a program component for input

or output operation from among a plurality of program components in a pallet in which the data input condition or data output condition acts.

20. A program reproducing method according to claim 10,
5 further comprising steps of:

searching for a conditional statement or conditional command representing a decision condition of an equivalent word based upon the description of an existing program; and

10 if a conditional statement or conditional command representing a decision condition of an equivalent word has been extracted, converting the extracted conditional statement or conditional command to a form that is in accordance with a program component from among a
15 plurality of program components in a pallet to which the equivalent word has been assigned.

21. A program reproducing apparatus comprising:

first storage means for storing a plurality of program components which construct a Lyee program;

20 second storage means for storing tense control function information, base structure information, pallet information, definitive information, route information and command information obtained from a process route diagram created based upon an existing program;

25 third storage means for storing an existing program applied thereto;

first assignment means for assigning a word, which is being used in the existing program that has been

stored in the third storage means, to one or a plurality of pallets among a W04 pallet, W02 pallet and W03 pallet, which are included in a base structure to which the word is related, based upon the tense control

5 function information, base structure information, pallet information and definitive information that has been stored in said second storage means; and

conversion means which, on the basis of the route information and command information that has been stored

10 in said second storage means, is for converting each statement or command of the existing program that has been stored in the third storage means to a form in accordance with any of the plurality of program components, which have been stored in said first storage

15 means, in the one or plurality of pallets to which a word included in the statement or command has been assigned.

22. A program reproducing apparatus according to claim 21, further comprising statement or command read-in

20 means for reading in a statement or command of an existing program.

23. A program reproducing apparatus according to claim 22, wherein if a word being used in a statement or command read in by said read-in means is related to a

25 definitive used in input processing, said first assignment means assigns this word to at least the W02 pallet; and

if a word being used in a statement or command that

has been read in is related to a definitive used in output processing, said first assignment means assigns this word to at least the W04 pallet.

24. A program reproducing apparatus according to claim
5 22, further comprising:

determination means for determining of the statement or command that has been read in by said read-in means, with regard to a statement or command including two or more words, whether a relationship
10 between two or more pallets to which respective ones of two or more words being used in the statement or command is a relationship that satisfies a predetermined sequence;

means, responsive to a determination by said
15 determination means that the relationship between two or more pallets does not satisfy the predetermined sequence, for decomposing the statement or command into a plurality of statements or commands and incorporating a new word in each statement or command obtained by
20 decomposition; and

second assignment means for assigning new words to one or a plurality of pallets in such a manner that the relationship between two or more pallets, to which two or more words included in each of the statements or
25 commands obtained by decomposition are assigned, will satisfy the predetermined sequence.

25. A program reproducing apparatus according to claim 22, further comprising self-word/given-word identifying

means for identifying whether a word being used in a statement or command that has been read in by said read-in means is a self word or a given word.

26. A program reproducing apparatus according to claim
5 21, wherein a program component for data generation has been stored in said first storage means; and

said conversion means converts a statement or a command, from among statements or commands of an existing program, that is for generating data to be
10 stored in a field represented by a word to a form in accordance with said program component for data generation from among said plurality of program components.

27. A program reproducing apparatus according to claim
15 21, wherein a program component, which is for performing overall control of a set of W04, W02 and W03 pallets, has been stored in said first storage means; and

said conversion means adopts a statement or command, which executes input/output processing with
20 regard to a screen, from among statements or commands of an existing program as part of a program component, which is for performing overall control of said W04, W02 and W03 pallets, from among said plurality of program components.

28. A program reproducing apparatus according to claim
25 21, wherein a program component for route determination has been stored in said first storage means, said apparatus further comprising:

route-branch-condition-command extraction means for extracting, from said conventional program on the basis of route information that has been stored in said second storage means, a conditional statement or conditional
5 command representing a branch condition of the route;

said conversion means converting the extracted conditional statement or conditional command to a form in compliance with a program component, which is for route determination, from among a plurality of program
10 components of a pallet from which branching of said route originates.

29. A program reproducing apparatus according to claim 21, wherein program components for an input operation and for an output operation have been stored in said
15 first storage means;

said apparatus further comprises data-input/output-condition-command searching means for searching for a conditional statement or conditional command representing a data input condition or a data output
20 condition based upon the description of an existing program; and

in a case where a conditional statement or conditional command representing a data input condition or a data output condition has been extracted, said
25 conversion means converts the extracted conditional statement or conditional command to a form that is in accordance with said program component for input or output operation from among a plurality of program

components in a pallet in which the data input condition or data output condition acts.

30. A program reproducing apparatus according to claim 21, wherein a program component for data generation has
5 been stored in said first storage means;

said apparatus further comprises equivalent-word-decision-condition-command searching means for searching for a conditional statement or conditional command representing a decision condition of an equivalent word
10 based upon the description of an existing program; and

in a case where a conditional statement or conditional command representing a decision condition of an equivalent word has been extracted, said conversion means converts this conditional statement or conditional
15 command to a form that is in accordance with a program component from among a plurality of program components in a pallet to which the equivalent word has been assigned.

31. A recording medium on which has been recorded an
20 assignment program for controlling a program reproducing apparatus for reproducing an existing program, which has been created by a method other than the Lyee development method, as a new program having a pallet structure in accordance with the Lyee development method while
25 maintaining functions accomplished by said existing program, said assignment program:

discriminating a type of definitive, to which a word being used by a statement or command of said

5 discriminating a type of pallet, to which said word
is to be assigned, based upon a read statement or
command regarding said word for which the type of
definitive to which the word belongs has been
discriminated; and

discriminating whether a word being used in said statement or command is a self word or a given word based upon the type of statement or command in which said word is being used; and

33. A recording medium on which has been recorded a conversion program for controlling a program reproducing

said existing program being such that information
10 relating to one or a plurality of pallets to which a
word is to be assigned is furnished with regard to a
word being used in a statement or command of said
existing program;

34. A recording medium according to claim 33, wherein a program component for data generation is included in said plurality of program components; and

25 said conversion program converts a statement or
command for generating data to be stored in a field
represented by a word to a form in accordance with a
program component for data generation among said
plurality of program components.

5 said conversion program adopts a statement or
command, which executes input/output processing with
regard to a screen, as part of a program component,
which is for performing overall control of a set of a
plurality of pallets, from among said plurality of
0 program components.

said conversion program:

15 extracts a conditional statement or conditional command, which represents a branch condition of the route, from said existing program on the basis of route information obtained from said existing program; and

20 converts the extracted conditional statement or conditional command to a form in compliance with a program component, which is for route determination, from among a plurality of program components of a pallet from which branching of said route originates.

said conversion program:

if a conditional statement or conditional command
5 representing a data input condition or a data output
condition has been extracted, converts the extracted
conditional statement or conditional command to a form
that is in accordance with said program component for
input or output operation from among a plurality of
10 program components in a pallet in which the data input
condition or data output condition acts.

15 said conversion program:

if a conditional statement or conditional command
20 representing a decision condition of an equivalent word
has been extracted, converts this conditional statement
or conditional command to a form that is in accordance
with a program component from among a plurality of
program components in a pallet to which the equivalent
25 word has been assigned.

39. A program reproducing apparatus for reproducing an existing program, which has been created by a method other than the Lyee development method, as a new program

having a structure in accordance with the Lyee development method while maintaining functions accomplished by said existing program, comprising:

- storage means for storing a plurality of program
- 5 components which construct a Lyee program;
- input means for inputting an existing program;
- definitive extraction means for extracting a definitive from the existing program that has been input;
- 10 word/definitive relationship extraction means for extracting a relationship between a word and a definitive from the existing program that has been input;
- input/output category extraction means for
- 15 extracting an input/output category of a word that has been extracted by said word extraction means for the existing program that has been input;
- assignment means for assigning a word that has been extracted by said word extraction means to one or a
- 20 plurality of pallets to which the word is related based upon the relationship between the word and definitive extracted by said word/definitive relationship extraction means and the word input/output category extracted by said input/output category extraction
- 25 means; and
- conversion means for converting each statement or command of the existing program to a form in accordance with any of a plurality of program components, which

have been stored in said storage means, in one or a plurality of pallets to which words contained in the statements or commands have been assigned.

FOR REPRODUCTION